ASG-SmartDoc™ Installation Guide

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Contents

Preface

This *ASG-SmartDoc Installation Guide* guides you in installing and maintaining ASG-SmartDoc (herein called SmartDoc). SmartDoc is a product used in the ASG Maintenance Programming Environment that automates the time consuming and error prone process of analyzing and documenting application programs.

Allen Systems Group, Inc. (ASG) provides professional support to resolve any questions or concerns regarding the installation or the use of any ASG product. Telephone technical support is available around the world, 24 hours a day, 7 days a week.

ASG welcomes your comments, as a preferred or a prospective customer, on this publication or on any ASG product.

About this Publication

This publication consists of these chapters:

- Chapter 1, "Introduction," contains an overview of SmartDoc.
- Chapter 2, "Customizing SmartDoc," describes the steps used to customize specific SmartDoc libraries, invoke SmartDoc, and to validate the SmartDoc installation.

Related Publications

The ASG-SmartDoc documentation library consists of these publications (where *nn* represents the product version number):

- *ASG-Center Installation Guide* (CNX0300-*nn*) contains ASG-Center installation and customization procedures. ASG-Center must be installed before ASG-SmartDoc is installed.
- *ASG-ESW Enhancement Summary* (ESW1000-*nn*) highlights the new functionality for this release.
- *ASG-SmartDoc Installation Guide* (DCX0300-*nn*) provides instruction for installing and maintaining ASG-SmartDoc.
- *ASG-SmartDoc User's Guide* (DCX0200-*nn*) describes ASG-SmartDoc instructions and report generation.

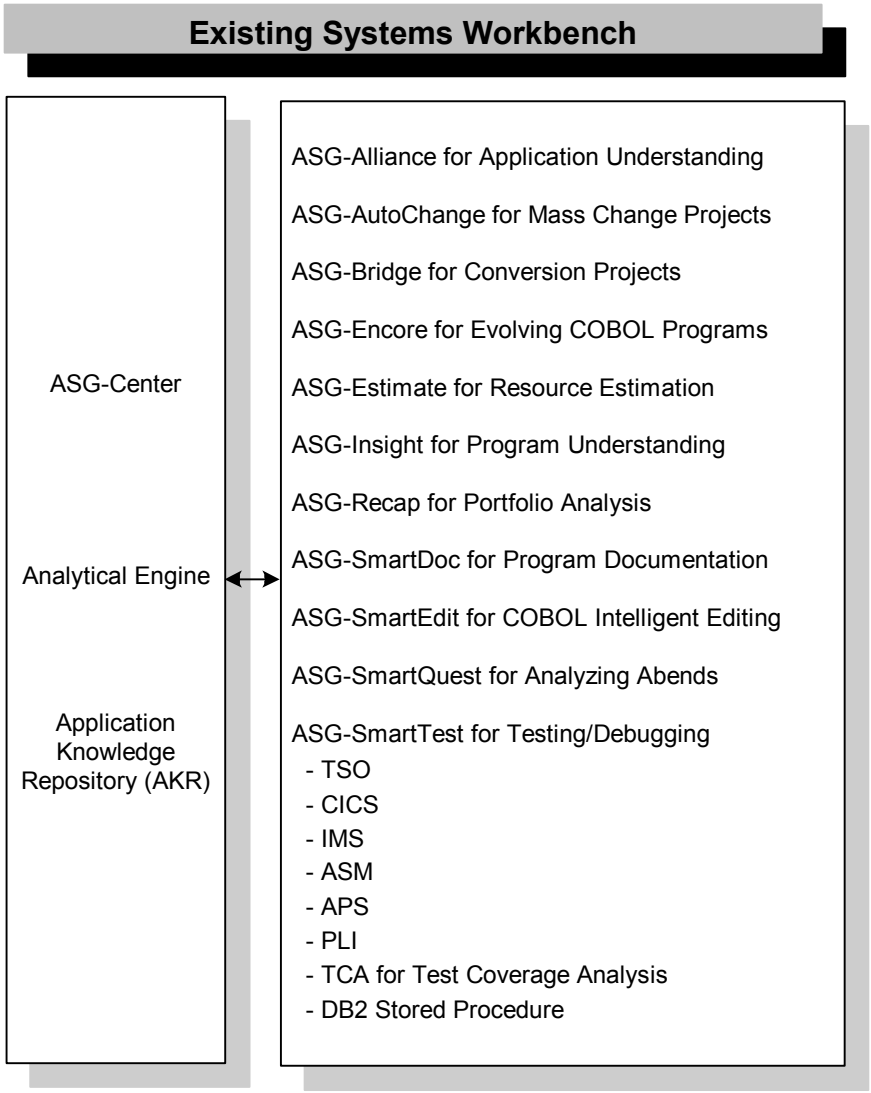
Note:

To obtain a specific version of a publication, contact ASG Customer Support.

ASG-Existing Systems Workbench (ASG-ESW)

ASG-ESW (herein called ESW) is an integrated suite of components designed to assist organizations in enhancing, redeveloping, or re-engineering their existing systems. ESW products use the Application Knowledge Repository (AKR) to store source program analysis information generated by the Analytical Engine. Figure 1 represents the components of ESW.

Figure 1 • ASG Existing Systems Workbench



This table contains the name and description of each ESW component:

ESW Product	Herein Called	Description
ASG-Alliance	Alliance	The application understanding component that is used by IT professionals to conduct an analysis of every application in their environment. Alliance supports the analysis and assessment of the impact of change requests upon an entire application. Alliance allows the programmer/ analyst to accurately perform application analysis tasks in a fraction of the time it would take to perform these tasks without an automated analysis tool. The impact analysis from Alliance provides application management with additional information for use in determining the resources required for application changes.
ASG-AutoChange	AutoChange	The COBOL code change tool that makes conversion teams more productive by enabling quick and safe changes to be made to large quantities of code. AutoChange is an interactive tool that guides the user through the process of making source code changes.
ASG-Bridge	Bridge	The bridging product that enables field expansion for program source code, without being required to simultaneously expand the fields in files or databases. Because programs are converted in smaller groups, or on a one-by-one basis, and do not require file conversion, testing during the conversion process is simpler and more thorough.
ASG-Center	Center	The common platform for all ESW products. Center provides the common Analytical Engine to analyze the source program and store this information in the AKR. This common platform provides a homogeneous environment for all ESW products to work synergistically.

ESW Product	Herein Called	Description
ASG-Encore	Encore	The program re-engineering component for COBOL programs. Encore includes analysis facilities and allows you to extract code based on the most frequently used re-engineering criteria. The code generation facilities allow you to use the results of the extract to generate a standalone program, a callable module, a complement module, and a CICS server. Prior to code generation, you can view and modify the extracted Logic Segment using the COBOL editor.
ASG-Estimate	Estimate	The resource estimation tool that enables the user to define the scope, determine the impact, and estimate the cost of code conversion for COBOL, Assembler, and PL/I programs. Estimate locates selected data items across an application and determines how they are used (moves, arithmetic operations, and compares). Time and cost factors are applied to these counts, generating cost and personnel resource estimates.
ASG-Insight	Insight	The program understanding component for COBOL programs. Insight allows programmers to expose program structure, identify data flow, find program anomalies, and trace logic paths. It also has automated procedures to assist in debugging program abends, changing a computation, and resolving incorrect program output values.
ASG-Recap	Recap	The portfolio analysis component that evaluates COBOL applications. Recap reports provide function point analysis and metrics information, program quality assessments, intra-application and inter-application comparisons and summaries, and historical reporting of function point and metrics information. The portfolio analysis information can also be viewed interactively or exported to a database, spreadsheet, or graphics package.
ASG-SmartDoc	SmartDoc	The program documentation component for COBOL programs. SmartDoc reports contain control and data flow information, an annotated source listing, structure charts, program summary reports, exception reports for program anomalies, and software metrics.

ESW Product	Herein Called	Description
ASG-SmartEdit	SmartEdit	The COBOL editing component that can be activated automatically when the ISPF/PDF Editor is invoked. SmartEdit provides comprehensive searching, inline copybook display, and syntax checking. SmartEdit allows you to include an additional preprocessor (for example, the APS generator) during syntax checking. SmartEdit supports all versions of IBM COBOL, CICS, SQL, and CA-IDMS.
ASG-SmartQuest	SmartQuest	The diagnostic tool for analyzing batch and CICS transaction abends. SmartQuest has been designed to make the maximum use of simple point-and-shoot techniques to enable fast and easy navigation through any data dump.
ASG-SmartTest	SmartTest	The testing/debugging component for COBOL, PL/I, Assembler, and APS programs in the TSO, MVS Batch, CICS (including file services), and IMS environments. SmartTest features include program analysis commands, execution control, intelligent breakpoints, test coverage, pseudo code with COBOL source update, batch connect, disassembled object code support, and full screen memory display.

Invoking ESW Products

The method you use to invoke an ESW product depends on your system setup. If you need assistance to activate a product, see your systems administrator. If your site starts a product directly, use the ISPF selection or CLIST as indicated by your systems administrator. If your site uses the ESW screen to start a product, initiate the ESW screen using the ISPF selection or CLIST as indicated by your systems administrator and then typing in the product command on the command line.

The product names can also vary depending on whether you access a product directly or through ESW. See "ESW Product Integration" on page ix for more information about using ESW.

To initialize ESW products from the main ESW screen, select the appropriate option on the action bar pull-downs or type the product shortcut on the command line.

Product Name (ESW Name)	Shortcut	ESW Pull-down Options
Alliance (Application Understanding)	AL	Understand ▸ Application
AutoChange (Conversion Set)	CC	Change ▸ Conversion Set
Bridge	BR	Change ▸ ASG-Bridge
Encore (Program Re-engineering)	EN	Re-engineer ▸ Program
Estimate	ES	Measure ▸ ASG-Estimate
Insight (Program Understanding)	IN	Understand ▸ Program
Recap (Portfolio Analysis)	RC	Measure ▸ Portfolio
SmartDoc (Program Documentation)	DC	Document ▸ Program
SmartEdit	SE	Change ▸ Program **Or** Change ▸ Program with Options
SmartQuest	SQV	Understand ▸ Abend/Dump
SmartTest (Testing/Debugging)	ST	Test ▸ Module/Transaction

ESW Product Integration

Because ESW is an integrated suite of products, you are able to access individual ESW products directly, or through the main ESW screen. As a result, different fields, values, action bar options, and pull-down options display on a screen or pop-up depending on how you accessed the screen or pop-up.

Certain ESW products also contain functionality that interfaces with other ESW products. Using SmartTest as an example, if Alliance is installed, SmartTest provides a dynamic link to Alliance that can be used to display program analysis information. If Insight is installed and specified during the analyze, the Insight program analysis functions are automatically available for viewing logic/data relationships and execution path. For example, the Scratchpad option is available on the Options pull-down if you have Insight installed.

Access to these integrated products requires only that they be installed and executed in the same libraries.

Example 1

Figure 2 shows the Encore Primary screen that displays when you access Encore directly.

The Encore Primary screen contains these eight action bar menu items: File, View, Extract, Generate, Search, List, Options, and Help.

Figure 2 • Encore Primary Screen

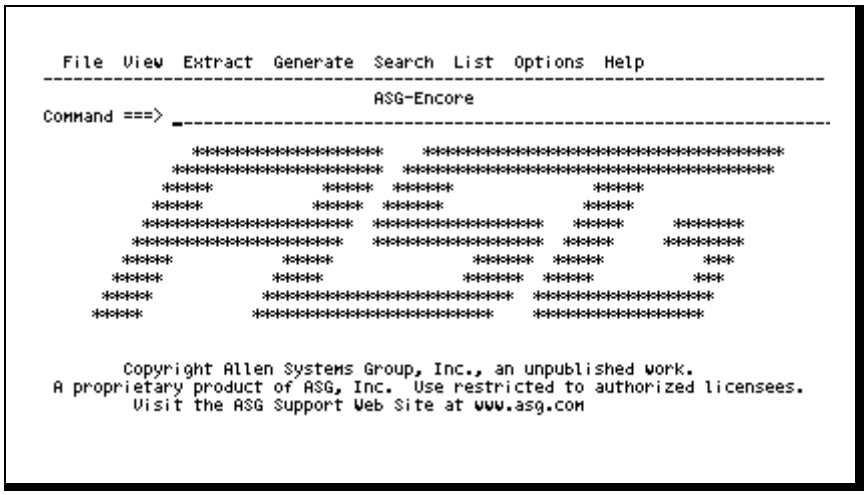
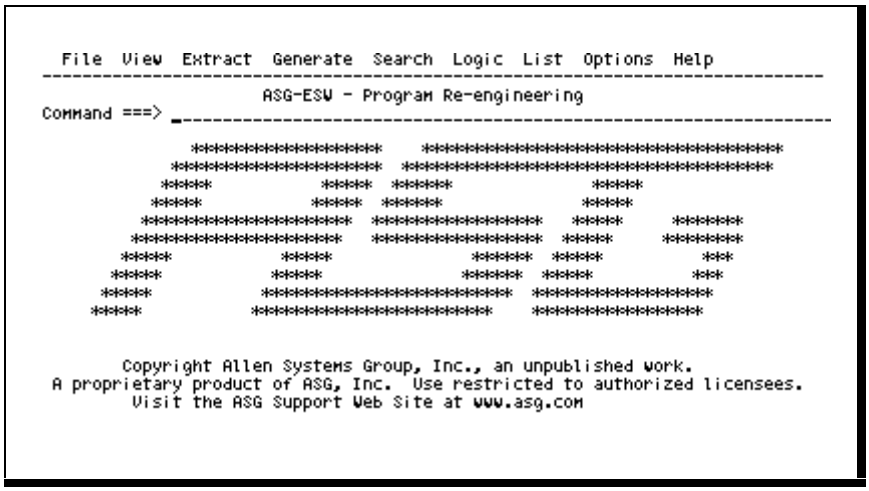


Figure 3 shows the Encore Primary screen that displays when you access Encore through ESW by selecting Re-engineer ▸ Program from the ESW action bar menu. Notice that the Primary screen name changes to ASG-ESW - Program Re-engineering when you enter Encore through ESW. Also, the Logic menu item displays if Insight is installed.

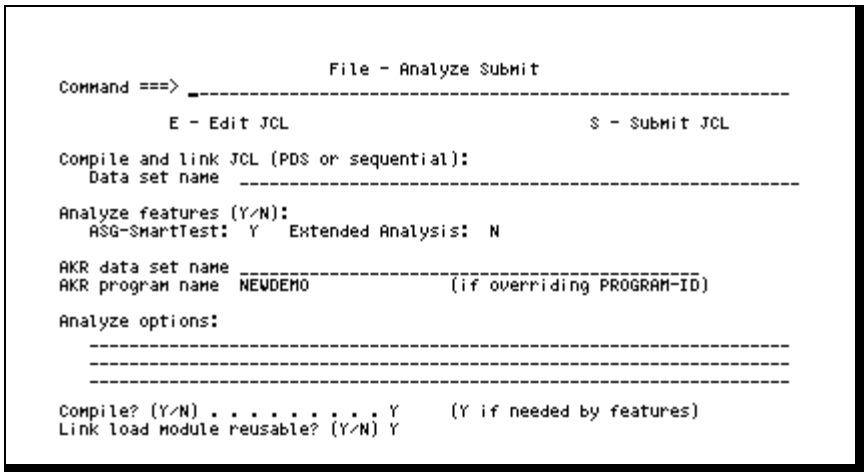
Figure 3 • ESW Encore Primary Screen



Example 2

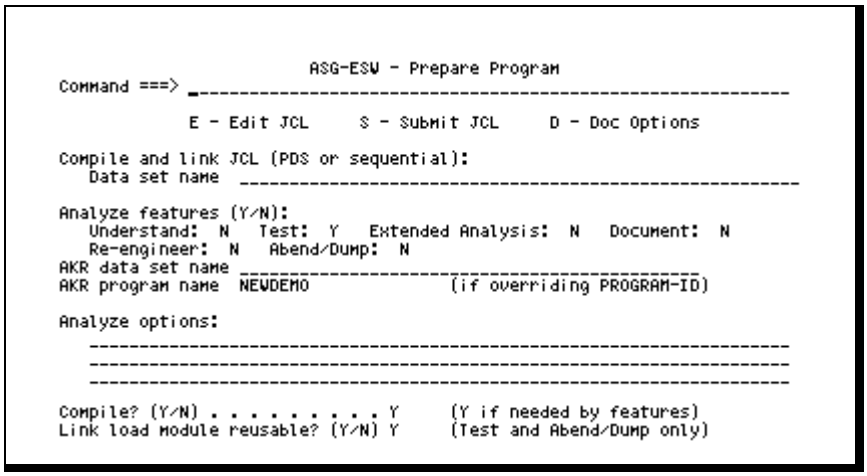
Figure 4 shows the File - Analyze Submit pop-up that displays when you access SmartTest directly. Figure 5 on page xii shows the File - Analyze Submit pop-up that displays when you access SmartTest through ESW.

Figure 4 • File - Analyze Submit Screen



The actions shown on these screens can also vary. For example, the D - Doc Options action is only available on the File Prepare Program screen (or File - Analyze Submit screen) if SmartDoc is installed on your system. In Figure 4 on page xi, the Doc Options action is not displayed.

Figure 5 • ASG-ESW - Prepare Program Screen (accessed through ESW)



Notice that the Analyze features field in Figure 5 lists additional ESW products than shown on Figure 4 on page xi. This field is automatically customized to contain the ESW products you have installed on your system. These are the names of the analyze types:

Analyze Type	Analyze Type (ESW)
ASG-Encore	Re-engineer
ASG-Insight	Understand
ASG-SmartDoc	Document
ASG-SmartQuest	Abend/Dump
ASG-SmartTest	Test
Extended Analysis (ASG-SmartTest with Insight installed)	Extended Analysis

Publication Conventions

ASG uses these conventions in technical publications:

Convention	Represents
ALL CAPITALS	Directory, path, file, dataset, member, database, program, command, and parameter names.
Initial Capitals on Each Word	Window, field, field group, check box, button, panel (or screen), option names, and names of keys. A plus sign (+) is inserted for key combinations (e.g., Alt+Tab).
lowercase italic monospace	Information that you provide according to your particular situation. For example, you would replace *filename* with the actual name of the file.
Monospace	Characters you must type exactly as they are shown. Code, JCL, file listings, or command/statement syntax.
	Also used for denoting brief examples in a paragraph.
Vertical Separator Bar (|) with underline	Options available with the default value underlined (e.g., Y|N).
Underline	Denotes a cursor-selectable field or line.

ASG Customer Support

ASG provides support throughout the world to resolve questions or problems regarding installation, operation, or use of our products. We provide all levels of support during normal business hours and emergency support during non-business hours.

ASG Third-party Support. ASG provides software products that run in a number of third-party vendor environments. Support for all non-ASG products is the responsibility of the respective vendor. In the event a vendor discontinues support for a hardware and/or software product, ASG cannot be held responsible for problems arising from the use of that unsupported version.

Intelligent Support Portal (ISP)

Online product support is available at: http://www.asg.com/support/support.asp via the ASG Intelligent Support Portal (ISP). Your logon information for ISP online support is:

Customer ID = *NNNNNNNNN*
Password = *XXXXXXXXXX*

where:

NNNNNNNNN is your customer ID supplied by ASG Product Distribution.
XXXXXXXXXX is your unique password supplied by ASG Product Distribution.

The *ASG-Intelligent Support Portal User's Guide* provides instructions on how to use the ISP and is located on the ASG Support web page.

Telephone Support

To expedite response time, please have this information ready:

- Product name, version number, and release number
- List of any fixes currently applied
- Any alphanumeric error codes or messages written precisely as displayed
- A description of the specific steps that immediately preceded the problem
- Verify whether you received an ASG Service Pack or cumulative service tape for this product. It may include information to help you resolve questions regarding installation of this ASG product. The Service Pack instructions are in a text file on the distribution media included with the Service Pack. You can access the latest software corrections and Service Packs via the ISP.
- The severity code (ASG Customer Support uses an escalated severity system to prioritize service to our clients. The severity codes and their meanings are listed below.)

Severity Codes and Expected Support Response Times

Severity	Meaning	Expected Support Response Time
1	Production down, critical situation	Within 30 minutes
2	Major component of product disabled	Within 2 hours
3	Problem with the product, but customer has work-around solution	Within 4 hours
4	"How-to" questions and enhancement requests	Within 4 hours

The Americas

	Phone	Fax	E-mail
United States and Canada	800.354.3578	1.703.464.4901	support@asg.com

Europe, Middle East, and Africa (EMEA)

During normal business hours, we recommend that you call the Central Support number first (except in South Africa).

	Phone	Fax	E-mail
Central Support	00.800.3544.3578	44.1727.812018	support.emea@asg.com
English	44.1727.736305	44.1727.812018	support.uk@asg.com
French	33.141.028590	33.141.028589	support.fr@asg.com
German	49.89.45716.200	49.89.45716.400	support.de@asg.com
Italian	39.0290450025		support.it@asg.com
Dutch	31.30.241.6133		support.nl@asg.com
Spanish	34.913.523.800	34.917.156.961	support.es@asg.com
South Africa	800.201.423		support.sa@asg.com

Asia Pacific (APAC)

	Phone	Fax	E-mail
Central Support	61.3.9645.8500	61.3.9645.8077	support.au@asg.com
Australia	800.637.947	61.3.9645.8077	support.au@asg.com
Hong Kong	800.96.2800		support.hk@asg.com
Japan	81.3.5326.3684	81.3.5326.3001	support.au@asg.com
Singapore	65.224.3080	65.224.8516	support.sg@asg.com

All Other Countries (Also for any non-working numbers)

	Phone	Fax	E-mail
All other countries	1.239.435.2201		support@asg.com

If you receive a voice mail message, follow the instructions to report a production-down or critical problem. Leave a detailed message including your name and phone number. An ASG Customer Support representative will be paged and will return your call as soon as possible. Please have available the information described previously when the ASG Customer Support representative contacts you.

ASG Documentation/Product Enhancements

Submit all product and documentation suggestions to ASG's product management team at http://www.asg.com/asp/emailproductsuggestions.asp.

If you do not have access to the web, FAX your suggestions to product management at (239) 263-3692. Please include your name, company, work phone, e-mail ID, and the name of the ASG product you are using. For documentation suggestions include the publication number located on the publication's front cover.

1 Introduction

This chapter contains an overview of SmartDoc and contains these sections:

Note:

ASG-Center must be installed and customized before SmartDoc is installed. If Center is not installed, see the *ASG-Center Installation Guide*.

ASG Service Pack

Verify you received an ASG Service Pack for this product. If so, read the instructions for installing the Service Pack before proceeding with the product installation. The installation instructions are located in a text file on the distribution media included with the Service Pack. If you have any problems with the Service Pack, contact ASG Customer Support.

SmartDoc Concepts

Program documentation gives IT professionals information about program structure and logic. This documentation is vital because programs constantly need to be changed or modified, and often the individual assigned the task is not the original author.

SmartDoc analysis offers you significant program knowledge, as well as documentation that includes a comprehensive report collection for you to use.

SmartDoc also provides software metrics that allow you to evaluate and rank programs within a system.

SmartDoc Features

SmartDoc gives you an enhanced set of current and accurate program documentation, reports, and documents you can access through an interactive user interface.

Operating Environment

These are the SmartDoc requirements:

- MVS/ESA or OS/390
- VSAM is required if any AKR is allocated as VSAM
- Storage above the 16M line is used for load modules and GETMAINs
- Direct access storage

  Note:
  See to the *ASG-Center Installation Guide* for the quantities.

- 3270 type terminals; Models 2, 3, 4, or 5

COBOL Support

SmartDoc products support these COBOL compilers:

- COBOL II (including releases 3 and 4)
- CASE-generated COBOL
- COBOL/370
- COBOL for MVS and VM
- COBOL for OS/390
- Enterprise COBOL Release 3.1

Preprocessor Support

SmartDoc products support these preprocessor languages directly:

- Command-level CICS
- Command-level DL/I
- IDMS
- SQL

Other preprocessed languages can be supported from the generated COBOL code.

2 Customizing SmartDoc

This chapter describes how to customize SmartDoc libraries, invoke SmartDoc, validate SmartDoc installation, and contains these sections:

Prerequisite

Note:

Center must be installed and customized before customizing SmartDoc. If Center has not been installed, see the *ASG-Center Installation Guide*.

Step 1 - Modifying CNTL Library Members

Modify these members, if applicable to your environment:

Member	Description
VIADCMP3	Compiles the VIADDEM3 COBOL II Release 3 test program.
VIADDCII	Compiles the VIADDDMO and VIADDEMI test programs.
VIADSDOC	Runs SmartDoc on a previously-analyzed program.

Modify these members only if ISPF is not installed:

Member	Description
VIASAKRA	JCL to allocate and initialize an AKR.
VIASAKRX	JCL to expand an AKR.
VIASAKRU	Maintains the AKR in batch. **Note:** For more information, see the Batch AKR Utility section in the ASG-Center Installation Guide.
VIASANJC	JCL to run the JCL conversion program. Specify the correct values for the parameters described in the table on the next page. These are contained in the applicable members listed above.

These are the parameters associated with each applicable member:

Parameter	Value	Library
ASG	Specifies the high-level node where the ESW products are installed.	VIADCMP3 VIADDCII VIADSDOC VIASAKRU VIASAKRA VIASAKRX VIASANJC

Parameter	Value	Library
CENTER	Specifies the second-level node where ESW products are installed. If the ESW dataset names contain more than three nodes, then specify all nodes except the first and the last as CENTER. For example, the dataset name of SYS3.CEN*xx*.NEW.LOADLIB should have ASG=SYS3 and CENTER=CEN*xx*.NEW.	VIADCMP3 VIADDCII VIADSDOC VIASAKRU VIASAKRA VIASAKRX VIASANJC
SYSOUT	Specifies the correct SYSOUT character.	VIADCMP3 VIADDCII VIADSDOC VIASAKRU VIASAKRA VIASAKRX VIASANJC
SYSDA	Specifies the appropriate UNIT for temporary datasets.	VIADCMP3 VIADDCII VIADSDOC VIASAKRU VIASANJC
COMPILR	Specifies the COBOL compiler load module name.	VIADCMP3 VIADDCII
COBCOMP	Specifies the COBOL compiler load library name.	VIADCMP3 VIADDCII
LOADLIB	Specifies the user load library.	VIADDCII
VIAAKR	Specifies the dataset name for the AKR.	VIADSDOC
AKRIN	Specifies the dataset name for the input AKR.	VIASAKRU
AKROUT	Specifies the dataset name for the output AKR.	VIASAKRU
PUNCH	Specifies the dataset name for the PUNCH file.	VIASAKRU
PERMVOL	Specifies the volume for the PUNCH file.	VIASAKRU

Overriding Default SmartDoc Installation Options

To override the default SmartDoc installation options, follow this step:

- Edit the ASG.VIACEN*xx*.CNTL member VIA$PRMD and modify the appropriate option.

Note:

See the *ASG-Center Installation Guide* for information on changing the installation option values.

These are the specific SmartDoc installation option parameters:

Parameter
Character-Back-Slash
Perform-Hier-Chart-Conditionals
Perform-Hier-Struct-Duplicates
Perform-Hierarchy-Chart-GOTO
Report-Advanced-Source
Report-Call
Report-Compiler-Output
Report-Condensed-Source
Report-Copy
Report-Data-Division
Report-Enhanced-Data-Xref
Report-Metrics
Report-Paragraph-Xref
Report-Perform-Hierarchy-Chart
Report-Perform-Interface
Report-Program-Exception

Parameter
Report-Structure-Chart
Report-Subset
Report-Verb-Context
Report-Verb-Frequency
SmartDoc-COBOL-List-To-SYSPRINT
SmartDoc-Help
SmartDoc-Minimum-Reports
Structure-Chart-Birds-Eye
Structure-Chart-Conditionals
Structure-Chart-GOTOs
Structure-Chart-Horizontal-Size
Structure-Chart-Max-Pages
Structure-Chart-Mode
Structure-Chart-Vertical-Size

Step 2 - Adding SmartDoc Modules to MLPA/PLPA

The SmartDoc main load modules VIADBTCH and VIADMAIN are re-entrant, and available for location in Extended LPA. These are the advantages of using Extended LPA:

- Reduced memory requirement per user
- Decreased required swap space
- Improved performance

Moving these modules to MLPA/PLPA is optional. ASG recommends you keep the original ASG load library (from the installation tape) as a staging library so required PTFs can easily be applied. You can copy the re-entrant modules to the Extended LPA and the non-reentrant modules to a separate user library. These steps also require you to change user logons or product allocations. The CNTL library contains two members, VIASLPAJ and VIASLPXJ, used to perform these copy steps.

Caution! Do not use the ISPF 3.3 copy feature to copy these modules because some modules have aliases.

Step 3 - Processing Considerations

COPYLIBs with Debug Limitations

Analyze does not expand copy flagged as DEBUG statements when you do not activate the DEBUG option. The COBOL compiler expands these entries, flagging each expansion line as DEBUG (e.g., a comment line since DEBUG is not active). This causes the line numbers between the COBOL source and the Analyze source to be different after the COPYLIB insertion, and produces sequence errors. SmartDoc can view programs with this issue, but statement displacements may be incorrect.

Step 4 - Invoking SmartDoc

To add a SmartDoc option to the ISPF Primary Menu or to another dialog menu, follow this step:

- Use this line to describe the SmartDoc option to the user:

```
% D +SmartDoc - ASG Static Analyzer and Program Documentation
Generator
```

  Use this line to invoke SmartDoc based on the user selection of the letter D:

```
D, 'CMD(%SMARTDOC) NEWAPPL(VIAD)'
```

Note:

After you update the ISPF environment, you may need to re-enter ISPF before the facilities are available.

To invoke SmartDoc with a CLIST, follow this step:

- Type `TSO VIASMDOC` on the command line in the ESW Primary screen.The VIASMDOC CLIST invokes the SMARTDOC CLIST while specifying the NEWAPPL(VIAD) parameter to set the correct application ID.

Step 5 - Validating SmartDoc for ISPF Sites

If ISPF is installed, review "Operating Environment" on page 2

If ISPF is not installed, go to, "Step 6 - Validating SmartDoc for Non-ISPF Sites" on page 22.

To verify that the installation completed successfully, an installation checkout form is included in the "Installation Checkout" on page 27 to assist in the installation.

Note:

The dataset names used in validation steps are the default names. If you changed them, use the changed names where the default names are specified.

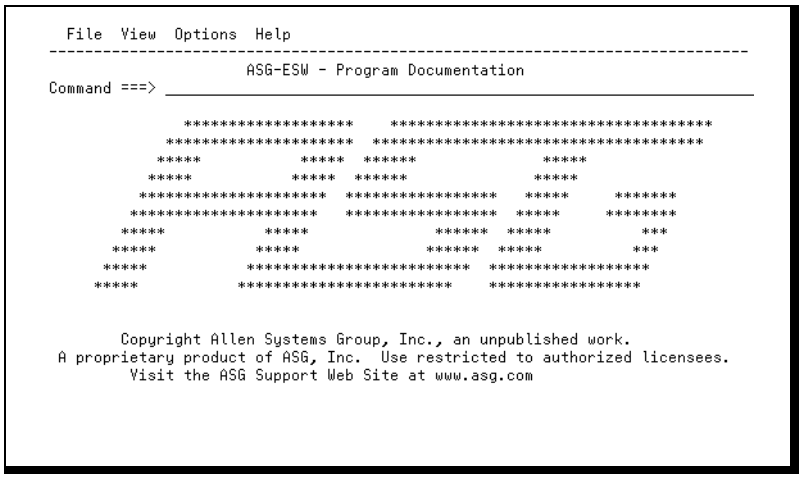
To test the logon library allocations

1 Select one of these options from the ISPF menu to enter SmartDoc:

- If you installed SmartDoc as described in "Step 4 - Invoking SmartDoc" on page 11, use the ISPF menu selection or the CLIST.
- If you installed the ESW product menu described in the *ASG-Center Installation Guide*, use the ISPF menu selection or the CLIST to display ESW Primary screen.

2 Select Document ▸ Program and press Enter to display the SmartDoc Primary screen (see Figure 6).

Figure 6 • SmartDoc Primary screen

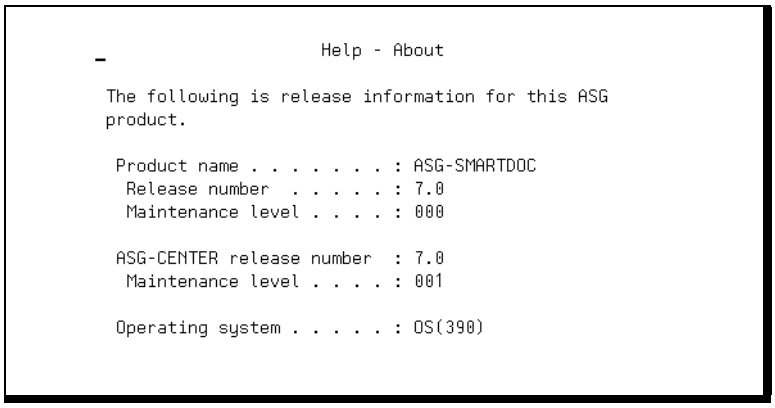


Note:

If you used the ESW Primary screen to enter SmartDoc, the product name displays as ESW - Program Documentation.

3 Select Help ▸ About and press Enter. The Help - About pop-up displays (see Figure 7).

Figure 7 • Help - About Pop-up



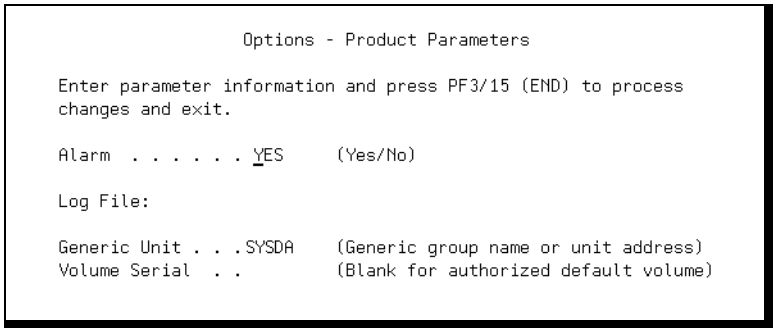
4 Verify the product releases and levels of SmartDoc and Center that are installed.

5 Press PF3/15 to exit Help About.

To review and/or modify SmartDoc options

1 Select Options ▸ Product Parameters from the SmartDoc Primary screen and press Enter. The Options - Parameters pop-up displays (see Figure 8).

Figure 8 • Options - Parameters Pop-up



2 Review and/or modify the parameter definitions, then press PF3/15 to exit the Options - Parameters pop-up.

3 Select Options ▸ Log file from the SmartDoc Primary screen and press Enter. The Options - Log Definition pop-up displays (see Figure 9).

Figure 9 • Options - Log Definition Pop-up

```
                        Options - Log Definition
Command ===> _____________________________________________________________

1 - Process log file     2 - Customized data set name

Options                     Log
----------------            ---
Process option  . . . . . . PD
Primary tracks      . . . . 1
Secondary tracks      . . . 2
Lines per page  . . . . . . 56
Sysout class  . . . . . . . *

Process options:  PK (print/keep), PD (print/delete), K, or D.


Job statement information:
  //NAME     JOB (ACCOUNT),NAME,
  //          MSGCLASS=A
  //*   INSERT '/*ROUTE PRINT NODE.USER' HERE IF NEEDED.
  //*
```

4 Complete these tasks:

a Review and/or modify the Log file defaults.

b Enter the JOB statement information and press PF3/15 to exit the Options - Log Definition pop-up.

5 Select Options ▸ PF keys from the SmartDoc Primary screen and press Enter. The Options - PF Key (01-12) Definition pop-up displays (see Figure 10).

Figure 10 • Options - PF Key (01-12) Definition Pop-up

```
                Options - PF Key (01-12) Definition
Command ===> _____________________________________________

Press Enter to process changes and/or to display alternate keys.
Press PF3/15 (END) to exit.

       Number of PF keys: 12        Terminal type: 3278

PF01 HELP
PF02 SPLIT
PF03 END
PF04 RETURN
PF05 RFIND
PF06 RCHANGE
PF07 UP
PF08 DOWN
PF09 SWAP
PF10 LEFT
PF11 RIGHT
PF12 CURSOR
```

6 Complete these tasks:

a Review and/or modify the PF key definitions.

b Press Enter to switch between PF keys 1 through 12 and 13 through 24.

c Press PF3/15 to exit.

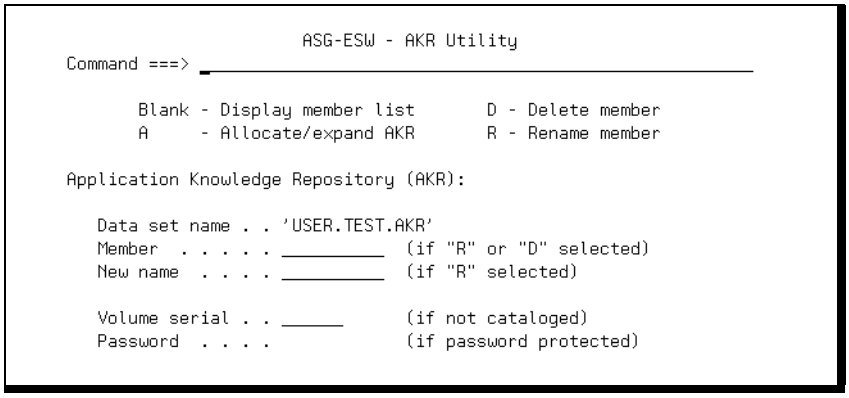
To allocate an AKR

Note:

Skip this step if you have already created an AKR while validating another ESW product.

1 Select File ▸ AKR utility from the SmartDoc Primary screen and press Enter. The ASG-ESW - AKR Utility pop-up displays (see Figure 11).

Figure 11 • ASG-ESW - AKR Utility Pop-up



2 Enter the name of the AKR to allocate.

3 Type `A` in the command line and press Enter. The File - AKR Allocate/Expand pop-up displays (see Figure 12).

Figure 12 • File - AKR Allocate/Expand Pop-up

```
                    File - AKR Allocate/Expand
Command ===> _____________________________________________________________

        S - Submit JCL       E - Edit JCL       C - Specify Catalog

Expand existing AKR . . . NO             (Yes or No)

AKR data set name . . . . 'USER.TEST.AKR'
  Volume  . . . . . . . . ______
  Unit  . . . . . . . . . ________       (Generic unit name)
  Space units . . . . . . RECORDS        (Records, Tracks or Cylinders)
  Primary space . . . . . 4000           (Primary amount in above units)
  Secondary space . . . . 0              (Secondary amount in above units)

Job statement information:
  //NAME     JOB (ACCOUNT),NAME,
  //         MSGCLASS=A
  //*   INSERT '/*ROUTE PRINT NODE.USER' HERE IF NEEDED.
  //*
```

Note:

The fields on the File - AKR Allocate/Expand pop-up vary depending on the settings for the Center installation option parameters, AKR-DSORG-VSAM and SMS.

4 Verify the AKR name on the File - AKR Allocate/Expand pop-up.

5 Enter the values for the Management Class, Storage Class, and Data Class if you are using SMS managed datasets.

6 When finished choose one of these tasks:

- Type `S` to submit the JCL.
- Type `E` to Edit the JCL.
- Type `C` to specify catalog.
- Press PF3/15 to exit.

SMS Managed Datasets

If you did not specify SMS managed datasets in the VIA$PRMS parameter SMS while installing Center, the ASMS fields do not display.

To specify SMS managed datasets

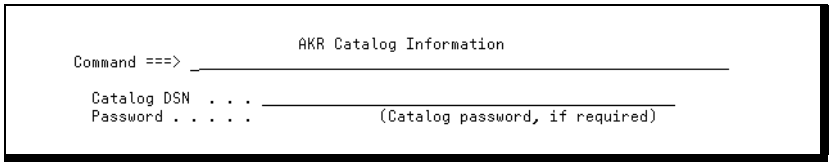
1. On the File - AKR Allocate/Expand pop-up, enter the value for Volume where the permanent AKR is to be placed.
2. Review the Space Units and Space Amount.
3. Enter the unique parameter for the selected volume if you are allocating a VSAM AKR.

   If this dataset needs to be cataloged under a user catalog, complete these tasks:

   a. Type `C` in the command input line to display the AKR Catalog Information pop-up (see Figure 13).

   b. Enter the Catalog DSN and password, and press PF3/15 to exit the AKR Catalog Information pop-up.

Figure 13 • AKR Catalog Information Pop-up

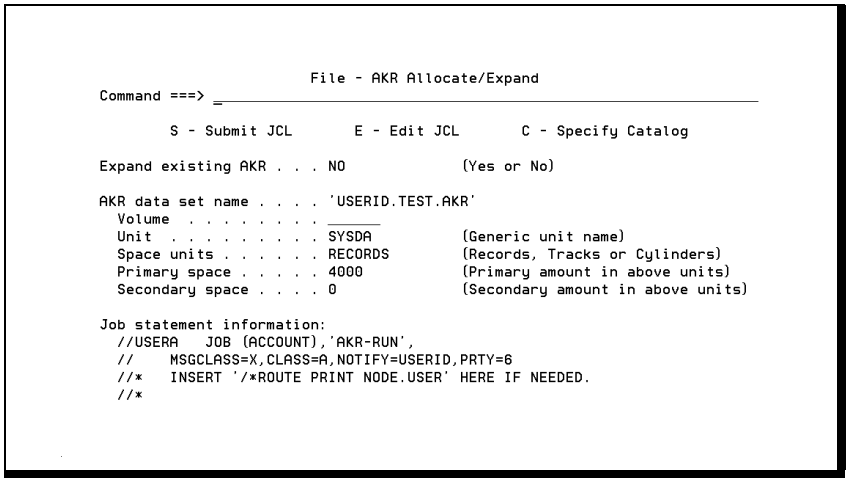


4. Enter JOB statement information for your site and type `S` to submit the job.
5. Verify the AKR was allocated and initialized when the job is finished.

6 Press PF3/15 to return to the SmartDoc Primary screen.

Figure 14 shows the File - AKR Allocate/Expand pop-up displaying a VSAM AKR with SMS support installed.

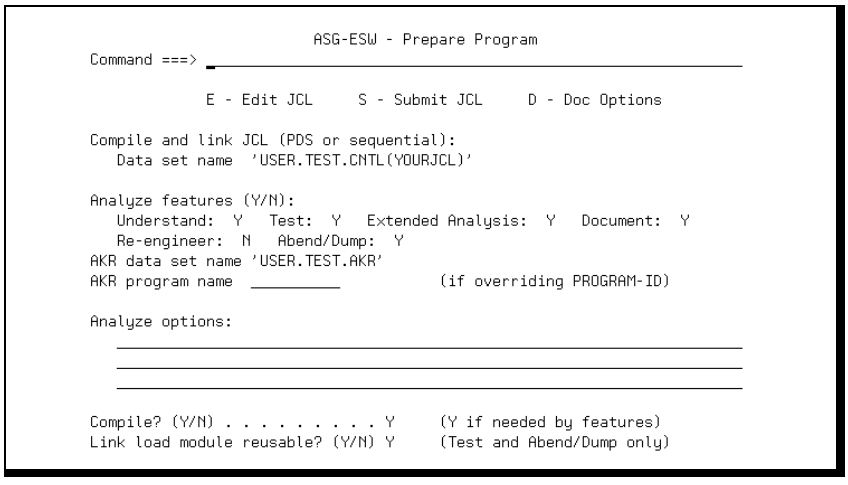
Figure 14 • File - AKR Allocate/Expand Pop-up with SMS and a VSAM AKR



To analyze the demonstration programs

1 Select File ▸ Analyze from the SmartDoc Primary screen and press Enter. The ASG-ESW - Prepare Program (see Figure 15) or Analyze Submit pop-up displays, depending upon how you started SmartDoc.

Figure 15 • ASG-ESW - Prepare Program Pop-up



2 Enter the appropriate information on the ASG-ESW - Prepare Program or Analyze Submit pop-up.

Note:

The compile and link JCL dataset name is ASG.VIACEN*xx*.CNTL. Use member VIADDCII or member VIADCMP3 for COBOL II Release 3.

3 Enter the AKR dataset name.

4 Type `D` in the command line to view the File - SmartDoc Report pop-up.

a Verify the parameters displayed match the default options.

b Set these parameters:

Set...	To...
Analyze	/
Compile?	Y
Extended Analysis	/
Produce Reports	/

5 Select the number for Select Reports in the Actions field and press Enter. The File - Select Reports pop-up displays.

a Verify that the selected reports match the default installation options set in "To review and/or modify SmartDoc options" on page 13.

b Select each applicable Report Option for review to verify that the options set in "To review and/or modify SmartDoc options" on page 13.

c Press PF3/PF15 to return to the File - SmartDoc Report pop-up.

To verify and submit the Compile/Analyze/SmartDoc job

1. Verify the JOB card and routing information by selecting the Edit JCL option in the Actions field on the File-SmartDoc-Report pop-up and press Enter.

2. When finished, press PF3/15 to return to the File - SmartDoc Report pop-up.

3. Type `SUBMIT` on the command line to submit the Compile/Analyze/SmartDoc job and press Enter.

4. Press PF3/15 to return to the File - SmartDoc Report pop-up.

5. Press PF3/15 to return to the Analyze Submit pop-up.

6. Verify that the analyze job and all requested SmartDoc reports completed.

   This uses the JCL conversion system and verifies that it operates correctly in your environment.

Note:

See the *ASG-SmartDoc User's Guide* and/or online help for information on the Analyze pop-ups.

To verify SmartDoc report formatting and correctness

1. Route the Compile/Analyze/SmartDoc job SYSOUT to the printer(s) normally used to print SmartDoc reports.

2. Separate SmartDoc reports from the job output.

3. Review the reports for proper formatting.

Note:

If the printer does not provide vertical bars or colons, it may be necessary to provide replacement characters in the default options as explained in the printer's manual.

To validate IDMS support by analyzing an IDMS program

1. Select File ▸ Analyze from the SmartDoc Primary screen and press Enter. The ASG-ESW - Prepare Program or Analyze Submit pop-up displays.
2. Enter the dataset name for the compile and link JCL for the IDMS program to be analyzed.
3. Enter the AKR dataset name.
4. Type `D` to view the File - SmartDoc Report pop-up, and set these parameters:

Set...	To...
Analyze	/
Compile?	`Y`
Extended Analysis	/
Produce Reports	/

5. Select Submit JCL in the Actions field and press Enter to submit the Compile/Analyze/SmartDoc job.
6. Verify the analyze job and SmartDoc reports ran.

Validating DB2 Support by Analyzing a DB2 program

Note:

If you have DB2, verify that ASG.VIACEN*xx*.CNTL(VIASBIND) ran (refer to the *ASG-Center Installation Guide*). This step is required for sites having DB2. Failure to complete the DB2 installation step results in erroneous behavior by ESW products.

1. Select File ▸ Analyze from the SmartDoc Primary screen and press Enter. The Analyze Submit pop-up displays.
   a. Enter the dataset name for the compile and link JCL for the DB2 program to be analyzed.
   b. Enter the AKR dataset name.

2 Type D to view the File - SmartDoc Report pop-up and set these parameters:

Set...	To...
Analyze	/
Compile?	Y
Extended Analysis	/
Produce Reports	/

3 Select Submit JCL in the Actions field and press Enter to submit the Compile/Analyze/SmartDoc job.

4 Verify the analyze job and SmartDoc reports ran.

Step 6 - Validating SmartDoc for Non-ISPF Sites

If ISPF is installed, see "Operating Environment" on page 2, and bypass this step.

To validate SmartDoc for non-ISPF sites

1 Edit and submit the VIASAKRA JCL to allocate and initialize an AKR.

2 Verify that the VIASAKRA job ran. If necessary, make corrections and resubmit the job.

3 Edit and submit the VIASANJC JCL with VIADDCII as the input JCL.

For this job, use these parameters in the parameters string or in the VIAIN DD statement:

- CMPL
- NOPANEL
- AKR(name of AKR allocated in 1)
- PGM(VIADDDMO)
- SD

4 Verify that the VIASANJC job ran. Make corrections and resubmit the job if required. VIASANJC produces JCL that compiles, links (if your original JCL linked), and analyzes your program.

5 Edit and submit the converted JCL.

For this job, use these additional parameters in the VIAIN DD statement:

- SDX
- SDR
- NOSYSPRINT
- VIADCOMP
- CMPL

6 Print the VIADDDMO output. Separate the SmartDoc reports, and verify the formatting and output.

Note:
If the printer does not provide vertical bars or colons, it may be necessary to provide replacement characters in the default options as explained in the printer's manual.

7 Edit and submit the VIADSDOC JCL by using VIADDDMO as the program. Use the AKR allocated in the first step. Since no parameters are necessary, use the defaults.

8 Verify that the VIADSDOC job ran. Make corrections and resubmit the job, if required.

9 Edit and submit the VIASAKRX JCL to test the AKR expansion job.

10 Verify that the VIASAKRX job ran. Make corrections and resubmit the job if required.

The customization and checkout of SmartDoc is complete.

Appendix A
COBOL Compiler Options

Introduction

These tables list the COBOL compiler options used by SmartDoc. Each table contains the options applicable to a particular compiler.

CA-Optimizer Compiler Options

These are the CA-Optimizer compiler options:

Required Compiler Option	Related Option	Comments
BUF=256K	SIZE	Minimum. Individual programs can require more.
MDMAP		Required for proper variable display during testing.
NONAME		Required for proper link-editing of test modules.
NONUM		Required for source display during testing.
PMAP	NOCLIST	Required for source code tracing during testing.
SIZE=512K	BUF	Minimum. Individual programs can require more.
SOURCE		Required.

COBOL II Compiler Options

These are the COBOL II complier options:

Required Compiler Option	Related Option	Comments
LIST	NOOFFSET	Required to locate verbs and paragraph/section names.
MAP		Required to locate data items in the user's load module.
NONUM		Required for compiler-generated line numbers.
NOOFFSET	LIST	Required since OFFSET overrides LIST.
SOURCE		Required.
NOOPTIMIZER		Required.

CA-Optimizer II Compiler Options

These are the CA-Optimizer compiler options:

Required Compiler Option	Related Option	Comments
LIST	NOOFFSET	Required to locate verbs and paragraph/section names.
MDMAP		Required to locate data items in the user's load module.
NONUM		Required for compiler-generated sequence numbers.
NOOFFSET	LIST	Required since OFFSET overrides LIST.
SOURCE		Required.

Appendix B
Installation Checkout

Company:

Installer:

Date: _____ / _____ / _____

Step 1- Product Test

Bypass this step if ISPF is not installed.

OK	Pending	Task
____	____	Use the AKR Utilities pop-up to perform these tasks: • Allocate a new temporary AKR (see "To allocate an AKR" on page 15). • Expand the new temporary AKR by using the EDIT JCL option on the AKR pop-up. • Delete the temporary AKR by entering this in the command line: `TSO DELETE 'temporary.akr.dsn'`

Step 2 - Product Test

Note:

Testing the Program Analyzer entails loading all variations of COBOL, source managers, and preprocessors into the AKR.

OK	Pending	Task
____	____	Analyze and run all of the SmartDoc reports for the VIADDDMO demonstration program (by using VIADDCII JCL). Print the SmartDoc reports and verify the formatting.
____	____	Analyze and run all of the SmartDoc reports for various user programs to test the preprocessors and source managers. Print the SmartDoc reports and verify formatting. After all user programs have been successfully tested, use the AKR Directory pop-up or the VIASAKRU JCL to delete all but the demo programs from the AKR.
____	____	Reanalyze and run all of the SmartDoc reports for the VIADDDMO demonstration program (by using VIADDCII JCL). Print the SmartDoc reports and verify the formatting. Verify that there are two values shown on each of the Metrics Report graphs.

Step 3 - Product Test

Bypass this step if ISPF is not installed.

OK	Pending	Task
____	____	Type `KEYS` and press Enter to verify that the default PF key assignments match those shown in the *ASG-SmartDoc User's Guide*.
____	____	Test the log file allocation. Type `DEBUG LOG` and press Enter to force the log file allocation, then type `PRODLVL` and press Enter to force output to the log file.
____	____	Test the log file job submission facility by entering option 1 to release the log file to print.

Step 4 - Product Test

Bypass this step if ISPF is installed.

OK	Pending	Task
____	____	Allocate and initialize an AKR by editing and submitting the VIASAKRA JCL. Verify that the VIASAKRA job ran successfully.
____	____	Edit and submit the VIASANJC JCL with VIADDCII as the input JCL. For this job, use these parameters in the parameter string or in the VIAIN DD statement: • CMPL • NOPANEL • AKR (previously allocated AKR name) • PGM(VIADDDMO) • SD
____	____	Edit and submit the converted JCL. For this job, use these additional parameters in the parameter string or in the VIAIN DD statement: • SDX • SDR • NOSYSPRINT • VIADCOMP • CMPL
____	____	Edit and submit the VIADSDOC JCL, with VIADDDMO as the program, using the AKR allocated above. Verify that the VIADSDOC job ran successfully.
____	____	Edit and submit the VIASAKRX JCL to test the AKR expansion job. Verify that the VIASAKRX job ran successfully

The installation of SmartDoc is now complete.

Appendix C
SmartDoc CNTL and CLIST Members

SmartDoc CNTL Members

These are the SmartDoc CNTL members:

Member	Description
VIA$PRMD	SmartDoc installation options member.
VIADDCII	JCL to compile and link the VIADDDMO and VIADDEM1 test programs.
VIADDDMO	SmartDoc test program.
VIADDEMO	SmartDoc COBOL test program.
VIADDEM1	SmartDoc COBOL test program.
VIADDEM3	SmartDoc COBOL II Release 3 test program.
VIADMAST	Copy member for VIADDDEMO and VIADDM3.
VIADSDOC	JCL to run SmartDoc on a previously-analyzed program.

SmartDoc CLIST Members

These are the SmartDoc CLIST members:

Member	Description
SMARTDOC	Used by the VIASMDOC CLIST to invoke the SmartDoc product from native TSO.
VIADTEST	Invokes the SmartDoc program under TSO test for diagnostic purposes only.
VIAEDUSR	User exit to support source managers other than the ISPF options of Librarian and Panvalet.
VIASMDOC	Invokes the SmartDoc program from a CLIST by using the correct application ID (VIAD).

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